

10 Archaeology and Cultural Heritage

10.1 Introduction

- 10.1.1 This assessment considers the potential direct and indirect effects of the development upon the archaeological and cultural heritage receptors within and surrounding the proposed project site (Figure 1.1). This assessment was made through extensive data gathering and site visit for archaeological Desk Based Assessment, a process that identified known archaeological and heritage receptors and the mitigation measures required. As the project site is located within the Gwent Levels Registered Historic Landscape (referenced as HLW (Gt) 2), the Chapter is supported by an Assessment of the Significance of the Impacts of Development on Historic Landscape or ASIDHOL2) of the Gwent Levels which forms Technical Appendix H1 to the ES.
- 10.1.2 The development concept outlined in Chapter 3 involves considerable ground disturbance within the project site and without appropriate forms of mitigation, development might lead to the loss of archaeological and cultural heritage receptors. Furthermore, the concept will impact both physically and indirectly upon the integrity and character of a portion of the Gwent Levels Registered Historic Landscape.

10.2 Legislation, policy context and guidance

The following legislation has been noted as relevant for the current assessment.

Legislation

- 10.2.1 **The Historic Environment (Wales) Act 2016** makes amendments to The Ancient Monuments and Archaeological Areas Act 1979 and to The Planning (Listed Buildings and Conservation Areas) Act 1990. It aims to deliver improved protection of scheduled monuments and listed buildings in Wales, to enhance the management of the historic environment and to establish a greater degree of transparency and duty regarding decisions that affect the historic environment. It also includes provisions concerning historic place names, a historic environment record for each local authority in Wales and for the formation of the Advisory Panel for the Welsh Historic Environment.

The Ancient Monuments and Archaeological Areas Act 1979 was introduced to make provision for the investigation, preservation and recording of matters of archaeological or historical interest and for the regulation of operations or activities affecting such matters. It requires Scheduled Monument Consent for any works of demolition, repair, and alteration that might affect a Scheduled Monument.

- 10.2.2 The Ancient Monuments and Archaeological Areas Act 1979 sets out a presumption in favour of preservation in-situ concerning receptors and monuments of national importance.

10.2.3 **The Planning (Listed Buildings and Conservation Areas) Act 1990** sets out the legislative requirements for the determination of any application affecting either listed buildings or a conservation area. The Act (Section 66) states that in considering whether to grant planning permission for development which affects a listed building or its setting, the local planning authority or, the Secretary of State shall have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses.

Policy context

The Acts outlined above form part of the wider Planning Policy Wales (PPW), Chapter 6 which deals with the protection of the historic environment in Wales.

10.2.4 **Planning Policy Wales (PPW) Edition 10 (December 2018)** sets out the land use planning policies of the Welsh Assembly Government. The Objectives of PPW are to:

- conserve and enhance the historic environment, which is a finite and non-renewable resource and a vital and integral part of the historical and cultural identity of Wales;
- recognise its contribution to economic vitality and culture, civic pride, local distinctiveness and the quality of Welsh life, and its importance as a resource to be maintained for future generations;
- base decisions on an understanding of the significance of Wales' historic assets;
- contribute to the knowledge and understanding of the past by making an appropriate record when parts of a historic asset are affected by a proposed change, and ensuring that this record or the results of any investigation are securely archived and made publicly available;
- protect the Outstanding Universal Value of the World Heritage Sites in Wales;
- conserve archaeological remains, both for their own sake and for their role in education, leisure and the economy;
- safeguard the character of historic buildings and manage change so that their special architectural and historic interest is preserved;
- preserve or enhance the character or appearance of conservation areas, while at the same time helping them remain vibrant and prosperous;
- preserve the special interest of receptors on the register of historic parks and gardens in Wales; and
- conserve areas on the register of historic landscapes in Wales.

10.2.5 **Technical Advice Notice (TAN) 24 2017** is intended to provide guidance on how the planning system considers the historic environment during development plan preparation and decision making on planning and Listed Building (LBC) to be used in conjunction with PPW. This guidance replaces Welsh Office

Circulars 60/96, 61/96 and 1/98. The TAN provides specific guidance on how the following aspects of the historic environment should be considered: World Heritage Receptors; Scheduled Monuments; archaeological remains; Listed Buildings; Conservation Areas; historic parks and gardens; historic landscapes; and historic assets of special local interest.

Relevant guidance

- 10.2.6 **The Standard and Guidance for historic environment desk-based assessment (Chartered Institute for Archaeologists (CIfA)) 2014** guidance applies to all types of non-intrusive assessment of the historic environment and aims to define a framework of study for carrying out and the reporting of desk-based assessments in line with the CIfA Code of Conduct. This guidance is also pertinent for the establishment of baseline information for this Chapter.
- 10.2.7 **Conservation Principles for the Sustainable Management of the Historic Environment in Wales 2011 (Cadw)** provide the basis upon which Cadw discharges certain statutory duties on behalf of the Welsh Ministers. Conservation Principles should be used by others (including owners, developers and other public bodies) to assess the potential impacts of a development proposal on the significance of any historic asset/assets and to assist in decision making where the historic environment is affected by the planning process.
- 10.2.8 **The Setting of Historic Assets in Wales 2017 (Cadw)** is guidance for assessing the impacts of development on the setting of historic assets. It sets out the meaning behind the term ‘setting’ in relation to a historic asset and how and when the setting should be assessed. Cadw is the Welsh Government’s historic environment service and the guidance sets out a staged process of assessing the impact of change on a setting.
- Stage 1: Identify the historic assets that might be affected by a proposed change or development.
 - Stage 2: Define and analyse the settings to understand how they contribute to the significance of the historic assets and, in particular, the ways in which the assets are understood, appreciated and experienced.
 - Stage 3: Evaluate the potential impact of a proposed change or development on that significance.
 - Stage 4: If necessary, consider options to mitigate or improve the potential impact of a proposed change or development on that significance.
- 10.2.9 The guidance from Cadw states that Local Planning Authorities (LPAs) must consult Cadw on all planning applications which in their opinion are within the setting of a scheduled monument and meet certain criteria listed in the guidance document. Planning Applications need to include sufficient information to assess the impact of the proposal on the historic asset and its setting, but this should be proportionate to the likely impact of the proposal.
- 10.2.10 **The Cardiff Local Development Plan (LDP)** was adopted in January 2016. It provides the framework for development and is used by the Council to guide and

manage development, providing a basis by which planning applications will be determined.

10.2.11 Policy EN9 of the LDP relates to the conservation of the historic environment. Development relating to any of the heritage assets listed below (or their settings) will only be permitted where it can be demonstrated that it preserves or enhances that asset's architectural quality, historic and cultural significance, character, integrity and/or setting.

- Scheduled Ancient Monuments;
- Listed Buildings and their curtilage structures;
- Conservation Areas;
- Archaeologically Sensitive Areas;
- Registered Historic Landscapes, Parks and Gardens; or
- Locally Listed Buildings of Merit and other historic features of interest that positively contribute to the distinctiveness of the city

10.2.12 The Policy aims to set out the criteria against which proposals affecting Cardiff Council/CC's heritage assets will be assessed. Occasionally built heritage will be a constraint, the need for preservation outweighing the benefit of development. More often, a heritage asset will be an opportunity for retaining local identity through the repair and reuse of historic assets and strengthening this through respect for local characteristics of design, for the interpretation of hidden heritage assets, or for the enhancement of the characteristic natural environment. All new developments within historic areas should be designed in such a way as to preserve or enhance their special character.

10.2.13 **The Newport Local Development Plan** was adopted in 2015. It provides the framework for development and is used by the Council to guide and manage development, providing a basis by which planning applications will be determined.

10.2.14 Policies CE4, CE5, CE6 and CE7 of the LDP relate to the conservation of the historic environment. Development relating to any of the heritage assets listed below (or their settings) will only be permitted where it can be demonstrated that it preserves or enhances that asset's architectural quality, historic and cultural significance, character, integrity and/or setting.

- Scheduled Ancient Monuments;
- Listed Buildings and their curtilage structures;
- Conservation Areas;
- Archaeologically Sensitive Areas;

- Registered Historic Landscapes, Parks and Gardens; or
- Locally Listed Buildings of Merit and other historic features of interest that positively contribute to the distinctiveness of the city

10.2.15 The Policy aims to set out the criteria against which proposals affecting Newport's heritage assets will be assessed. Occasionally built heritage will be a constraint, the need for preservation outweighing the benefit of development. All new developments within historic areas should be designed in such a way as to preserve or enhance their special character.

10.3 Scoping and consultation

Scoping

- 10.3.1 A Scoping Report (dated 5th July 2018,) was submitted and a subsequent Scoping Opinion received from the Glamorgan-Gwent Archaeological Trust Archaeological Planning Management (GGAT APM), the archaeological advisors to Cardiff Council/CC, on 18 July 2018 (Appendix A1). As a consultee for the Scoping Opinion, GGAT APM requested that the assessment should include a programme of geophysical survey work, followed by trial trenching. GGAT APM also advised that as the development was located within the statutorily designated Gwent Levels Registered Historic Landscape (referenced as HLW (Gt) 2) there was a requirement to carry out an Assessment of the Significance of the Impact of Development on Historic Landscape Areas on the Register of Landscapes of Historic Interest in Wales (ASIDHOL2), with Cadw acting as the Statutory Consultee.
- 10.3.2 An ASIDHOL2 assessment has been carried out (see Appendix H1) which incorporates a further walkover survey. The recommendations for geophysical survey and subsequent trial trenching are expected to be conditions applied to any significant development in this locality but as the Planning Application is being made in outline, they have not been undertaken at the outline stage of the application process. It is anticipated that at reserved matters stage, a targeted programme of fieldwork focusing on areas that will actually be developed will be undertaken.

Table 10.1: Response to scoping opinion

Scoping opinion clause	Scoping opinion	Response
GGAT Scoping opinion Ref : CAR0623/RD	Geophysical survey followed by trial trenching ASIDHOL2 assessment required Cadw to be Statutory Consultee	Application is being made in outline, therefore geophysical survey and trial trenching are not considered necessary at this stage. It is anticipated that they would be conditioned through the planning approval process.

Baseline data collection

10.3.3 Statutory bodies consulted for this assessment are as follows:

- Cadw- scheduled monuments, listed buildings and registered landscapes
- The Glamorgan-Gwent Archaeological Trust curators of the Historic Environment Record- non-designated assets (Ref: 5719)
- Royal Commission on the Ancient and Historical Monuments of Wales curators of the National Monuments Record- non-designated assets (Ref: RC 18-0018)
- Central Register of Air Photography for Wales-aerial photographs (Ref: W AP PR 18-010)
- Glamorgan Archives- cartographic and documentary sources, along with relevant published information.
- Gwent Archives- cartographic and documentary sources, along with relevant published information.
- British Geological Survey (BGS) geology of Britain viewer (geological data)
- Glamorgan Gwent Archaeological Trust Archaeology Planning Management

10.4 Methodology

Overview

Methodology for establishing baseline conditions

10.4.1 Initial assessment comprised a Desk Based Assessment of existing information about the archaeological resource within a 1km study area centred at NGR ST 25048 80915, which point is the centre of the project site (Figure 10.1). The statutory bodies listed in 10.3.3 were consulted and site visits were carried out to compile a list of cultural heritage receptors that may have been impacted by the proposals. This process noted the presence of only two archaeological receptors within the project site. An assessment of the significance and potential impact of any development upon these receptors was made according to the criteria in section 10.4.4 using the methodology outlined below.

Assessment methodology

Significance threshold

10.4.2 The determination of significance comes through the assessment process and in Wales it is considered that all the appropriate sources should be consulted, and that understanding the significance comes from this. The Wales Historic Environment Record forms part of the Legislation, and their content is considered automatically significant to be considered within any assessment process. There is

therefore no determinable point within the assessment for a threshold of [determining] significance, it comes through the assessment of the searches content. By default, therefore, if it has been included in the assessment, a receptor is deemed to be above any threshold of significance.

Significance Criteria

- 10.4.3 For the Desk Based Assessment, the sensitivity of archaeological receptors within the study area were categorised in accordance with nationally agreed criteria derived from the Design Manual for Roads and Bridges (DMRB) (January 2020, LA106 Revision 1: Cultural Heritage):
- Category A: national importance
 - Category B: regional importance
 - Category C: local importance
 - Category D: low importance
- 10.4.4 To these an additional category has been added
- Category U: unknown
- 10.4.5 The assessment of the importance of individual receptors is a subjective exercise based upon the experience of the project team. The importance of certain receptors will be implied by their status within the statutory framework. Scheduled Ancient Monuments will always be of national importance; Listed Buildings will be of at least regional importance. **Values** assigned to other receptors are given both in relation to their individual importance and to their context within the wider landscape.
- 10.4.6 The **condition** of individual receptors and the general overall condition of surviving remains has bearing on the value of the receptors themselves and on the value that they impart within a wider landscape context. The condition of receptors is recorded following the system used by the GGAT HER, using the following criteria:
- Intact: the receptor is intact
 - Near intact: the receptor is nearly intact
 - Damaged: the receptor has been moderately damaged
 - Near destroyed: the receptor has nearly been destroyed
 - Destroyed: the receptor has been destroyed

- Restored: the receptor has been restored
- Moved: the receptor has been moved (usually finds)
- Not known: the condition of the receptor is not known

10.4.7 For the purposes of desk-based assessments, rarity is assessed using the following criteria:

- High: very few receptors of this type are known
- Medium: the receptor is not unusual, but cannot be considered common
- Low: the receptor is quite common

10.4.8 **Group association** is where a connection between receptors within the landscape can be demonstrated. These will usually be of the same period, but may include groups where the presence of an earlier receptor or receptors has led to the formation of a later complex, or where an earlier receptor or receptors can be shown to have acquired importance as part of a later complex. The criteria are as follows:

- High: the receptor forms part of an interconnected complex occupying a clearly definable landscape where little or no fragmentation has occurred
- Medium: the receptor is part of an interconnected complex, which is either limited in scope or badly fragmented
- Low: there are few or no other receptors that are associated

10.4.9 **Historical association** is where there is a link between the receptor and known historical or cultural persons or events. Prehistoric receptors, which are by definition before historical evidence, cannot have any contemporary historical association, but they may acquire later associations. For the Roman and Early-medieval periods, where survival of historical evidence is poor and patchy, any contemporary documentation at all will be important. Two classifications are given for historical association, one reflecting the certainty of the identification (Certain, Possible and Unknown), and the other its importance (High, Medium, and Low). Only receptors with certain or possible association can be assessed for importance, and historical association can only increase the importance of a receptor; the absence of it will never decrease its importance.

10.4.10 The assignment of values to identified interests requires consideration of the reliability and accuracy of the source data, ranging from fully-recorded features seen in open excavation to antiquarian comments on finds of note from a poorly-defined location. The **confidence** with which the values have been assigned is noted, using the following criteria:

- High: existing information is reliable and detailed
- Medium: existing information is apparently reliable but limited in detail

- Low: existing information is too limited to allow its reliability to be assessed; or the source is unreliable.

10.4.11 The effect of the proposal on the archaeological receptors has been assessed using the following criteria:

- Severe: total loss
- Major: significant loss, likely to result in a reduction of value of the surviving receptor
- Minor: loss unlikely to result in a reduction of value of the surviving receptor
- None: no identifiable effect
- Beneficial: development will protect, preserve or enhance the receptor better than if the development did not occur.

Indirect Effects (Monument and Landscape settings)

10.4.12 Indirect effects identified for the archaeological resource include those of visibility and setting issues. Only monuments of National and Regional importance with a direct visual significance will be assessed for indirect effects. This includes monuments where historical lines of sight or setting are important factors such as inter-visibility between prehistoric sites and landscapes. If the development is situated within (or sometimes in close proximity to) a Registered Historic Landscape then an ASIDOHL2 (Assessment of the Significance of the Impact of Development on Historic Landscape) assessment is usually required. This has been undertaken and is available as Technical Appendix H1.

10.4.13 It should be noted that the methodology utilised for the assessment of impact during the data gathering phase (the Desk Based Assessment) is different to that used for the assessment of impact of the development upon the Registered Landscape (the ASIDHOL2 process at Appendix H1). These differences result in contradictory assessment terminology and ratings of overall impact. The aims are different and there is no dichotomy in understanding the significance of the historic environment if the conclusions of these are different, as they are two different pieces of early stage historic environment mitigation.

10.4.14 It follows that there is no single universal grading that applies to the proposed project site and both assessments are appropriate, despite the contradictory terminology and assessment gradings.

Hedgerow Regulations

10.4.15 *The Environment Act 1995* (section 95) provided a framework to protect important hedgerows from activities that were not subject to planning consent. The *Environment Act 1995* and *The Hedgerow Regulations 1997* were specifically intended to provide objective criteria of importance, which could be applied consistently across England and Wales. The Hedgerow Regulations are

administered by the local planning authorities, with the opportunity to develop local criteria for protection being restricted to designation as a key landscape characteristic for development control purposes (Section 7b ii) by the relevant date (April 1997). The Regulations permit the removal of any hedgerow (including any stretch of hedgerow) for ‘carrying out development for which planning permission has been granted’ on the basis that the development control process provides a framework for weighing up the loss of hedgerows against the benefits of a proposal. As such, the significance of surviving hedgerows needs to be considered.

10.4.16 The Hedgerow Regulations were the subject of a review by the Department of the Environment, Transport and the Regions, *Review of the Hedgerow Regulations 1997* (1998), which suggested a simplified set of criteria, notably to include all pre-1845 or pre-1800 hedgerows where the field system is substantially complete. The Government noted the proposed changes but has not endorsed them (*The Government’s response to the Environment, Transport and Regional Affairs Committee’s Report ‘The Protection of Field Boundaries’ 1999*). The 1997 criteria therefore remain in force. Judicial Review of the application of the regulations (Flintshire County Council v NAW and Mr J T Morris) has clarified the interpretation of some of the criteria.

10.4.17 The criteria of historic importance in *The Hedgerow Regulations 1997* can be summarised as:

- marking a parish or township boundary;
- incorporating or associated with a Scheduled Monument or receptor on the Scheduled Monuments Register at the relevant date;
- marking a pre-1600 AD manor or estate boundary, or related to a building of such a manor or estate;
- part of a field system pre-dating 1845 shown on a map in a Record Office;
- part of a pre-1845 field system that is substantially complete;
- part of a pre-1845 field system where the pattern was identified in 1997 as a key landscape characteristic

As the extant field boundaries within the project site have remained consistent since their depiction of the area on the Tithe Map of 1846, it follows that the hedgerows are part of a substantially complete pre-1845 field system and full under the Hedgerow Regulations.

Assumptions

10.5.1 The assessment following data collection was undertaken with the following assumptions:

- The assessment is based on information available from the baseline data as provided by statutory consultees up to April 2020;

- It is assumed that all known historic assets as held on the databases of the statutory consultees (Regional Historic Environment Record, Royal Commission for Historical and Ancient Monuments Wales and Cadw) are correct as at April 2020.

10.6 Baseline Environment

- 10.6.1 The Gwent Levels, in which the proposed project site is located, comprise approximately 111km² of reclaimed land, located between the rivers Ely and Wye (Rippon 1996: 4)¹. The Gwent Levels are an artificial landscape which was created by the enclosing and draining of tidal saltmarshes and originate in the Roman period (Maynard 1995: 5)². The Gwent Levels and have been designated a Registered Historic Landscape (reference Gwent Levels Historic Landscape (HLW (Gt) 2)) as they are the largest and most significant example of hand-crafted landscape in Wales (Hart 2008: 5)³. The Gwent Levels have been broken down into separate land parcels, each exhibiting slightly different characteristics that reflect their own particular trajectory of historical development. These land parcels are known as Historic Landscape Character Areas, each having their own reference number and each forming a distinct component of the overall Registered Gwent Levels landscape.
- 10.6.2 The proposed project site is located entirely within the Gwent Levels Historic Landscape (HLW (Gt) 2). Specifically, the site incorporates elements from two Historic Landscape Character Areas (HLCAs), Trowbridge (HCA019) and Rumney (HLCA018) which are component parts of the Registered Gwent Levels Historic Landscape (Figure 10.2).

¹ Rippon, S. 1996, *Gwent Levels: The Evolution of a Wetland landscape*, CBA Report 105.

² Maynard, D. 1995, *Archaeological Desk-based Assessment: Cardiff Waste Water Treatment Works Environmental Assessment*. Report No. 95/077

³ Hart, R., 2008, *Newlands Road, Wentloog, Cardiff: Archaeological watching brief*, GGAT Report **2008/079**.

- 10.6.3 The topography and geology of the surrounding area is key to understanding human activity within and around the proposed project site. The Levels are known to have a rich and wide range of archaeological features and artefacts dating from prehistoric finds to modern Second World War defence structures. Therefore, the Levels are regarded as a uniquely rich archaeological and historical resource in Wales (Cadw, CCW and the International Council on Monuments and Sites UK (ICOMOS UK 1998, the official advisor to UNESCO on cultural World Heritage Sites)⁴.

Prehistoric (up to AD43)

- 10.6.4 Archaeological evidence has shown that the Gwent Levels (including the proposed project site) have been exploited from the Mesolithic period onwards; the Gwent Levels were a tidally-inundated saltmarsh until the end of the Iron Age (Rippon, 1996: 9)¹. Evidence of the human activity is known on the ridge of high ground running broadly parallel to the coast along which the modern A48 road runs. The ridge is located approximately 1km north of the project site. Also, numerous finds, archaeological features and structures have been discovered along the coast line and at Peterstone Great Wharf which lies approximately 1.2km to the south-east from the proposed project site. These scattered finds of prehistoric material are direct evidence for prehistoric activity in the area of St Mellons inland and Peterstone on the coast and dating mostly to the Bronze Age. A bronze axe head was recovered approximately 1.5km west of the proposed project site (PRN 00641s), three pottery sherds from Trevisker- type vessel (PRN 05718g) found about 1.3km away, and a small encampment of Bronze Age date near Peterstone Gout, approximately 1.5km to the west of the project study area (Yates et al. 2001)⁵.

Roman (AD43 to 410)

- 10.6.5 There is significant known Roman activity in this region. To the west of the proposed project site, successive forts were constructed in Cardiff (PRN 00101s), on the east side of the Taff, on the site where the Medieval Cardiff Castle was later constructed. To the east of the proposed project site, significant Roman occupation was present with the construction of the headquarters of the Second Augusta Legion at Caerleon, together with extensive civilian activity which developed in parallel. The proposed project site lies between Cardiff and Caerleon and it is likely that the locality was heavily influenced by the Roman presence in the region.

⁴ Cadw, ICOMOS UK, Countryside Council for Wales; Joint Initiative, 1998, *Register of Landscapes of Historic Interest in Wales, Part 2 of the Register of Landscapes, Parks and Gardens of Outstanding Historic Interest in Wales*

⁵ Yates, A, Roberts, R. and Walker, M. 2001. Cardiff WWTW: archaeological investigation along wentlooge Sewers 1998-2000. GGAT Report No: **2001/094**

10.6.6 A major Roman road, Iter XII of the Antonine Itinerary, running from Carmarthen to Wroxeter, is believed to have run through Cardiff connecting the Roman fort there to the road network, although there is little physical evidence of its existence (RR 60b-08). The route is believed to be fossilised by modern roads and is thought to follow the line of the modern Newport Road (A48), which runs 1.5km north west of the proposed project site. It is possible that trackways or spurs from this road would have developed and they may be found close to the proposed project site. As a result of the low elevations encountered throughout, much of the landscape of the Gwent Levels incorporates numerous drainage ditches to manage water levels. These ditches are known as reens and can vary in size, being categorised either as primary (larger capacity draining large areas) or secondary (lower capacity draining localised areas) reens. One of the primary reens (see Biodiversity Chapter 7) flanking the minor roadway that forms the eastern boundary of the proposed project site is known as Heol Las (Green Road in Welsh) or Greenlane Reen. The name Greenlane is often found in association with ancient and Roman trackways as it is possible that this road and associated ditch has a very old origin (see below).

Early Medieval (410AD to 1086) and Medieval (1086 to 1536)

- 10.6.7 Generally, the medieval landscape of the Gwent Levels was dominated by pastures and meadows, of which the majority were common lands, but others belonged to extensive ecclesiastical estates.
- 10.6.8 The history of Peterstone Wetlooge, located approximately 1.3km to the south east on the proposed project site, is well known and may be used as a general guide for the history of the proposed project site. The date attributable to St Peters Church (PRN 00020g) in Peterstone Wentlooge is uncertain. The account given by Coxe in his book titled: *An Historical Tour in Monmouth* (1801)⁶ suggests that the church was built in the 12th century by Mabel, daughter and heiress of Robert Fitzhamon and wife of Robert Earl of Gloucester. She is said to have then handed the church to the St Augustine's Abbey in Bristol along with sixty acres of land associated with the parish of Peterstone (Coxe 1801, 73-74)⁴. In disagreement to this date, Bradney (1993: 86)⁷ describes the church as having been built in the 14th century, making its date approximately two hundred years later than the date given by Coxe.
- 10.6.9 Peterstone Wentlooge may be also the site of monastery of St Peter of the Moor (PRN 00021g, PRN 0512g, Figure 10.1). Up until 1954 at least, foundations of an early building were visible to the east of the present church and were thought to be associated to the monastic building (Maynard 1995: 11)². A stone figure (PRN 04269g) possibly of a lady dated to c 1400AD may have originated from the monastery (Maynard 1995: 11)².

Post-Medieval (1536 to the end of the 19th century) to Modern

⁶ Coxe, W. 1801, *An Historical Tour in Monmouthshire*. London.

⁷ Bradney, J.A. 1993, *A History of Monmouthshire, Volume 5: The Hundred of Newport*. Cardiff & Aberystwyth.

- 10.6.10 The Gwent Levels have been in use continuously through the Post-Medieval period, which was the time when the gradual enclosure of common land was taking place. This process was completed only in the 19th century. There were several farms in the area as well as manor houses. Also, there is some evidence for increased drainage activity between c1625-1640 (Rippon 1996)¹.
- 10.6.11 Inland of the present sea wall, located approximately 2.7km south west of the proposed project site are the remains of a late 16th century sea wall (Scheduled Monument Gm474) constructed when pressure from rising tides and/or frequent floods made it necessary for new sea defences to be provided. This monument is of importance as it is one of the few features that can be accurately dated; it is certain that the landward rectangular field pattern predates the construction of the sea wall and is thus considered a significant early landscape (Tuck 2004)⁸.
- 10.6.12 The medieval St Peters Church in Wentlooge discussed above (PRN 08243g) bears a mark on the east end that indicates the height that the water reached during the floods of 1606 at 1.80m above average sea levels and it is almost certain that the inundation would also have affected parts of the proposed project site (Bradney 1993: 86)⁷.
- 10.6.13 Although not a designated heritage receptor, the Heol Las road and associated ditch that demarcates the eastern proposed project site boundary also marks the boundary between the parishes of Peterstone Wentloog and St Mellons. The boundary dates to at least 1500 and therefore indicates that the ditch and probably the road were in existence during the same period.

Proposed project site Specific Archaeological Background

- 10.6.14 The proposed project site wholly falls within the Gwent Levels Registered Historic Landscape (Reference number HLW(Gt)2). The majority of the proposed project site lies within Character Area 019: Trowbridge Historic Landscape Characterisation, a component part of the Registered Landscape, which is described as a medieval landscape of long, narrow ‘planned’ fields situated on the lower-lying back fen with drainage provided by a network of major reens and grips (internal field channels), and a series of minor ‘green lanes’ which may be medieval drove roads, typically delimited by drainage ditches, such as Heol Las [Green Lane] to the east. Heol Las also marks the modern boundary between the Cardiff and Newport Unitary Authorities. The remainder falls within Character Area 018 Rumney, described as an irregular field pattern of small irregular shaped fields (preserving lines of former tidal creeks), although much of the Character Area closest to the proposed project site is encroached by modern development.
- 10.6.15 The hedgerows that separate the land divisions within the proposed project site are historic, as they appear virtually unchanged from the Tithe Map of the area

⁸ Tuck, M. 2004 : *Rumney Great Wharf, Rumney, Cardiff: archaeological assessment*. GGAT Report 2004/04

dated to 1846 and it is possible that at least some have been present since the 17th century or earlier.

- 10.6.16 The Trowbridge Character area shares the eastern and southern boundary with Character Area 17: Peterstone, which is characterised by trapezoidal blocks of very long, narrow fields defined as Roman (Rippon 1996: 26)¹.
- 10.6.17 The proposed project site encompasses only a small portion of Rumney Character Area 18, to the west of Pil du Reen. There are no current proposals to carry out active development within that portion of the proposed project site.
- 10.6.18 There are 39 receptors of historic interest (see 10.8.3) within the study area recorded on the Regional Historic Environment Record (HER). In addition to that there are 35 events recorded by the HER (see 10.6.20). Events are defined as archaeological interventions that have created an archive record. These events can range from simple walkover surveys to archaeological watching briefs and excavations.
- 10.6.19 There are no World Heritage Sites, Scheduled Monuments, Registered Parks and Gardens or Listed Buildings within or adjacent to the proposed project site.

Previous investigations and potential for remains

- 10.6.20 35 events of archaeological significance recorded by the HER have taken place within the Project study area, two of which took place within the proposed project site itself. Relatively few produced evidence for archaeological receptors and only the most relevant have been listed below.
- 10.6.21 The Glamorgan-Gwent Archaeological Trust was commissioned by Cardiff County Council in 2000 to undertake a desk-based assessment (E002980) for the potential effect of two proposed highway options at St Mellons, Cardiff, neither of which proceeded. There was no direct effect on any identified receptors within the assessment, which was centred on an area located approximately 1.2km south west of the proposed project site apart from a stretch of South Wales Main Railway Line and the Historic Landscape Gwent Levels, however both highway options were assumed to affect the landscape of field boundaries and reed systems. The effect on the ‘planned’ Roman origin landscape was unknown, as well as potential unknown archaeological receptors, of which the effect could only be estimated with prior exploratory work, including programmes of geophysical survey and evaluation, and record by survey (Mackintosh 2000)⁹.
- 10.6.22 An archaeological evaluation (E005135) of the land between Crickhowell Rd and Willowbrook Drive, Trowbridge, Cardiff, located approximately 1.6km west of the proposed project site, was undertaken in 2005. A total of 26 trenches were excavated and several archaeological features were recognised across the

⁹ Mackintosh, J. 2000, *St Mellons Link Road, Cardiff highway options 1&2: stage 1 archaeological assessments*, GGAT Report 2000/04

site. The evaluation identified a Roman farmstead. The remains of a ditched enclosure dated to the mid to late 3rd to 4th centuries (04113s), evidence of a substantial structure inside the enclosure and a significant amount of cultural material (pottery and bones) were discovered. Also, a possible trackway leading to the settlement was discovered. Moreover, several undated features, such as ditches, were also exposed across the receptor and it is possible they were associated with the Roman drainage system. Within some Roman features flint tools dating to the late Neolithic/Bronze Age were discovered. Also, a number of later drainage ditches contained Post-medieval and modern artefacts¹⁰.

- 10.6.23 An archaeological evaluation (E005056) on land at Trowbridge Rd, St Mellons, Cardiff, located approximately 1.9km west of the proposed project site was carried out in 2004. The evaluation concentrated on an area identified by a previous geophysical survey. Excavated trenches revealed a system of Roman drainage ditches and probable building or buildings of late 2nd/early 3rd century or later date. Finds recovered from the site included a large quantity of Roman pottery and two sherds of middle to late Iron Age pottery¹¹.
- 10.6.24 An archaeological evaluation (E000128) was undertaken on land south of the Beacon Centre, Harrison Drive, St Mellons, Cardiff, 0.7km west of the proposed project site, in 2007. Two trenches were excavated within the area and no features or deposits of archaeological interest were identified during the evaluation. No finds were recovered from the site¹².
- 10.6.25 An archaeological watching brief was carried out (E004719) at Wentlooge Corporate Park, Cardiff, approximately 1.4km south west of the proposed project site in 2002. Thirty geological trial pits were excavated and a peat layer probably dating to the Neolithic/Bronze Age was evident in the excavated pits. Also, in one pit a possible buried Roman land surface was found. Archaeological finds recovered from the site included a wooden post of possible Bronze age date, Roman brick/tile, and multiple pottery sherds of Post-medieval origin¹³.
- 10.6.26 A watching brief (E005765) was undertaken at St. Albans, 92 St Mellons Rd, Marshfield, approximately 0.65m east of the proposed project site in 2016. There were a small number of 18th/20th century pottery recovered from the site

¹⁰ Brett, M., 2005, *Land between Crickhowell Rd and Willowbrook Drive Trowbridge Cardiff Archaeological Evaluation*, Cotswold Archaeology Report: 05084

¹¹ Havard, T., 2004, *Areas 9-12 Trowbridge Road St Mellons Cardiff. Archaeological Evaluation*, Cotswold Archaeology Report 04066

¹² Hart, J. 2007, *Land South of the Beacon centre Harrison Drive. St Mellons, Cardiff. Archaeological Evaluation*, Cotswold Archaeology Report: 07018.

¹³ Gilbert, D.R., 2002, *An Archaeological Watching Brief At Wentlooge Corporate Park, Cardiff*. Chanel Archaeology Report: March 2002.

but no significant archaeological features were noted during the works. All contexts had been disturbed by earlier ground works¹⁴.

- 10.6.27 In 2003, an archaeological evaluation (E004669) was undertaken on land at Blacktown Farm, Marshfield, Newport approximately 0.95km north east of the proposed project site. The work comprised of the excavation of five trial trenches across the evaluation area, which revealed evidence for Post-medieval activity in the form of rubble and a wall foundation. Also, evidence of ridge and furrow, and a single Medieval ditch were discovered (HER). A subsequent archaeological watching brief (E004668) was carried out at Blacktown Farm during groundworks for the construction of two detached houses in 2003. The shallow nature of the excavations for the proposed development meant that a full examination of the historical uses of the site was not possible. Traces of ridge and furrow earthworks, noticed during the previous evaluation works, were observed. Notable in the north east corner of the site was an area of exposed natural with right angled sides that was undisturbed by the ridge and furrow. A significant assemblage of unstratified 13th-14th century and Post- medieval pottery was recovered during the fieldworks (HER).
- 10.6.28 The study area for the proposed project site lies within the boundary of the Rural Settlement of Roman Britain project (E005431). No direct evidence of Roman activity has been found in the proposed project site (Allen et al 2015)¹⁵.

¹⁴ Phillips, A.O. 2016, Archaeological Watching Brief Report WB/MSF/15 St Alban's, 92 St Mellons Rd, Marshfield. Archaeological Perspectives Analysis Consultancy.

¹⁵ Allen, M, Blick, N, Brindle, T, Evans, T, Fulford, M, Holbrook, N, Richards, J.D, Smith, A. : 2015 : The Rural Settlement of Roman Britain: an online resource : <http://archaeologydataservice.ac.uk/archives/view/romangl/index.cfm> (Viewed 6th of April 2020)

10.7 Assessment of effects

- 10.7.1 A total of 39 receptors of archaeological and cultural heritage interest have been identified within the study area (Table 2, Figure 10.1) through the baseline data gathering.
- 10.7.2 Five-digit ID numbers within Table 10.2 with a letter suffix ('g' and 's') are Primary Record Numbers (PRNs) recorded in the regional HER. Four, five or six figure numbers without a letter suffix are National Primary Record Numbers (NPRNs) of the National Monuments Record (NMR), as supplied by the Royal Commission on Ancient and Historical Monuments Wales (RCAHMW). Numbers preceded by the letters 'LB' are Listed Building numbers, whilst those prefixed by the letters 'HL' are Historic Landscapes.
- 10.7.3 Note that there are six Listed Buildings as one number appears twice due to the HER crossover of receptors.

Table 10.2: Identified historic interests within Study Area

	ID	Receptor Name	NGR	Type	Period	Status
1	01333s, 20656, LB13905	Pill Du Farm, Hendre Road	ST 24244 80120	Farmhouse	Post-Medieval	Listed Building
2	43344	Pill Du Outbuildings	ST 2424 8012	Buildings	Post-Medieval	-
3	LB23534	Entrance Gateway Faendre Hall	ST 24446 82143	Gateway	Post-Medieval	Listed Building
4	01361s, 36839, LB13944	Lodge at Faendre Hall	ST 24438 82150	Gate Lodge	Post-Medieval	Listed Building
5	01362s, 43230, LB13946	Faendre Hall Stables; Former Stable Block at Faendre Hall	ST 24384 82117	Stable	Post-Medieval	Listed Building
6	01363s LB13945	Vaindre Fawr Farmhouse	ST 24410 82070	Farmhouse	Post-Medieval	Listed Building
7	00361s, 36838, LB13945	Faendre Hall	ST 24410 82070	House	Post-Medieval	Listed Building
8	266083	Faindre House, Garden, St Mellons	ST 24404 82104	Garden	Post-Medieval	-
9	LB23535	Circular Garden Seat at Faendre Hall	ST 24435 82078	Garden seat	Post-Medieval	Listed Building
10	HLW(GT) 2 Gwent Levels	Gwent Levels		Landscape		Historic Landscape
11	86852	Wentlooge Levels	ST 2600 8000	Field system - Landform	General	-

	ID	Receptor Name	NGR	Type	Period	Status
12	309948	Wentloog Industrial Park Dispersal Sheds	ST 2420 7939	Building (Defence)	20 th Century	-
13	01365s, 20336	Melrose Hall, Vaindre Lane	ST 2427 8185	House	Post-Medieval	-
14	01366s, 43300	Melrose Hall Stables	ST 2435 8181	Stable	Post-Medieval	-
15	20335	Melrose Cottage	ST 243 818	House	Post-Medieval	-
16	96089	St Mellons Busines Park	ST 24000 81000	Office	Post-Medieval	-
17	417242	Ansells Brewery Depot, Marshfield	ST 25555 82300	Depot	20 th Century	-
18	05076s, 410512	Llanarthen, St Mellons Country Club/Hotel, Marshfield	ST 24753 82367	House	19 th Century	-
20	266085	Llanarthen, Garden, Marshfield	ST2475382428	Garden	Post-Medieval	-
21	43405	Vaindre Vawr; Faendre Fawr; Barn	ST 2418 8152	Barn	Post-Medieval	-
22	01364s, 21074	Barn; Vaindre Fawr	ST 2408 8158	Farmhouse	Post-Medieval	-
23	12923	Sunday School, Black Town	ST 2601 8199	Chapel	Post-Medieval	-
24	307412	Church of the Resurrection, St Mellons	ST 2359 8129	Church	Post-Medieval	-
25	00635s	Wern Gelthin	ST 2429 8083	Farmhouse	Medieval	-
26	03104g	St Arthan's Chapel	ST 2682	Chapel	Medieval	-
27	03941g	The Old Vicarage, Marshfield	ST 2573 8249	Vicarage	Post-Medieval	-
28	04260g	Stone figure	ST 267 803	Findspot	Medieval	-
29	05209g	Receptor of gout	ST 263 800	Sluice gate	Unknown	-
30	05212g	Ruins 300' (90m) northwest of St Peter's Church	ST 267 803	Monastery	Unknown	-
31	05213s	Occupation lens at Rumney Great Wharf	ST 24642 81000	Buried Soil Horizon	Roman	-
32	05592g	Sluice House Farm	ST 253 792	Findspot	Medieval	-
33	08364g	Llanarthen (Llwyn Arthen)	ST 244 824	Chapel	Medieval	-

	ID	Receptor Name	NGR	Type	Period	Status
34	08365g	Possible receptor of Llanarthen	ST 2570 8250	Enclosure	Unknown	-
35	08392g	The Vicarage House, Marshfield	ST 2570 8250	Enclosure	Unknown	-
36	10878g	Windmill, Dowlais	ST 250 820	Windmill	Medieval	
37	10990g	Ridge & Furrow at Blacktown Farm	ST 26114 81737	Ridge & Furrow	Medieval	-
38	11601g	Chapman's Farm	ST 25492 79380	Building	Post-Medieval	-
39	11602g	Sluice Farm	ST 25280 79360	Building	Post-Medieval	-

Assessment

Assessment of effects from construction

10.7.4 During the initial assessment of identified sites, it was assessed that proposed development within the project site is likely to have a direct effect on only two receptors of historic interest (Table 10.3), the historic landscape and elements of a field system comprised of field boundaries, hedgerows, reens, sluices, footbridges and remains of Medieval ridge and furrow.

10.7.5 A 'Major' effect is envisaged on elements of 86852 Wentlooge Levels (Field system) and all features associated with it. The 86852 Wentlooge Levels field system consists of the network of historic fields (which extends beyond the project site) forming part of the wider Gwent Levels Registered Historic Landscape straddling the Trowbridge and Peterstone Historic Landscape Character Areas. A 'Major' effect is envisaged on HLW(GT) 2 Gwent Levels (Landscape). No effect is envisaged on the remaining 37 receptors.

10.7.6 No Scheduled Ancient Monuments, Listed Buildings, Registered Parks or Gardens are present within the proposed project site.

Table 10.3: Direct effects of the development on historic interests

ID	Receptor Name	Type	Period	Condition	Status	Effect
HLW(GT) 2 Gwent Levels	Gwent Levels	Landscape	Medieval /Post-Medieval	Near intact	Historic landscape	Major
86852	Wentlooge Levels	Field system	Variable	Near intact	-	Major

10.7.7 The proposed development will have a direct effect on the Gwent Levels Registered Historic Landscape HLW(Gt) 2 as the proposed project site lies within two of its component land parcels (Trowbridge Historic Landscape Character Area 019 and Rumney Historic Landscape Character Area 018).

Within the project site, the proposals will directly affect elements of the 86852 Wentlooge Levels field system, which is the only known archaeological receptor within the red line boundary.

The area of the proposed project site proposed for active development represents over 22% of the Trowbridge 019 Historic Landscape Character Area, a component part of the Registered Historic Landscape. Development within the proposed project site will therefore have a ‘Major’ effect on the Registered Landscape under the methodology for the Desk Based Assessment and a ‘Fairly Severe’ direct effect on Trowbridge Historic Landscape Character Area 019, as assessed as part of the ADIDOHL2 process (Table 10.1).

Table 10.1 ASIDOHL2 STAGE 5: Summary of the overall significance of impact on landscape of historic interest, Trowbridge, ‘HLCA 019’

VALUE OF CHARACTER AREA (Based on STAGE 4 results)	IMPACT CAUSED BY DEVELOPMENT (Based on STAGES 2 & 3 results)	REDUCTION OF VALUE OF HISTORIC LANDSCAPE AREA ON REGISTER
<p>Low Key elements of low to moderate importance and/or condition and/or group value, and/or of generally low significance in this or other historic landscape areas on the Register.</p> <p>SCORE: 3</p>	<p>High Substantial land loss and consequent fragmentation and/or visual intrusion causing key elements to be removed or changed so that group value and/or coherence and/or integrity are significantly diminished, and/or amenity value greatly reduced.</p> <p>SCORE: 8</p>	<p>High Development impact on key elements is such that the overall value of the historic landscape area on the Register is significantly reduced.</p> <p>SCORE: 8</p>
TOTAL SCORE: 19	OVERALL SIGNIFICANCE OF IMPACT: Fairly Severe	

Trowbridge is a fragmented landscape in which the integrity and coherence has been compromised. Whilst some surface ridges relating to water management features (reens and grips) have survived well, piecemeal development has caused fragmentation. The development will be sited fully within this HLCA, occupying just over 22% of the area and the impact is therefore necessarily substantial. Whilst the archaeological potential is unknown, the landscape is probably more significant for its ecological significance.

- 10.7.8 Nevertheless, development within the proposed project site will only directly impact a very small proportion of the overall Gwent Levels Registered Landscape HLW (Gt) 2 (0.955% of the overall area based on the proposed project site boundary). The ASIDHOL2 process resulted in a ‘Slight’ overall assessment of impact on the Registered Landscape (see Figure 10.3 and ASIDHOL Technical Appendix H1).
- 10.7.9 The proposals include the relocation of 4.3km of secondary reen from the area north of the rail line to an area south of the rail line, known as the Southern Mitigation Area (see Biodiversity Chapter 7). As such, it is considered that the development will have a ‘Major’ effect on the Wentlooge levels field system 86852 including reens, sluices, hedgerows and footbridges.
- 10.7.10 The effects of alteration to the pattern of reens and ditches may produce local

changes in moisture content within the geology which may have an indirect and unintended effects upon previously unknown archaeological assets. For example previously waterlogged deposits may become dryer, leading to potential loss of well preserved organic material. However, the extent of any change is difficult to assess in areas for which there is no currently known archaeological information.

- 10.7.11 The proposals include the removal of 3.5km of hedgerow associated with field system 86852 north of the rail line and 0.4km of hedgerow south of the rail line. As the majority of the hedgerow appears to be historic (*i.e.* appears on the Tithe map of 1846), the sections to be removed will be subject to the Hedgerow Regulations.

Indirect effect of the proposed development on archaeological receptors and landscapes

- 10.7.12 It is also necessary to consider the potential indirect effects on any nearby Scheduled Monuments and Listed Buildings. Indirect effects are classified as physical and visual. Indirect physical effects are categorised as:

- An increased risk of exposure, erosion, disturbance, decay, dereliction or any other detrimental physical change to elements, during or consequent to development.
- Related to (a), the likelihood of increased management needs to maintain elements as, for example, through altered habitats, water levels, increased erosion, new access provision, etc., during or consequent to development.
- The severance, fragmentation, dislocation or alteration of the functional connections between related elements, for example, a field system becomes ‘severed’ from its parent farmstead by an intervening development.
- The frustration or cessation of historic land use practices, for example, it becomes more difficult or impossible to manage an area in a traditional manner as a result of development.
- The frustration of access leading to decreased opportunities for education, understanding or enjoying the amenity of elements, during or consequent to development.

Indirect (non-physical) visual effects are categorised as:

- Visual impact on elements from which a development can be seen (considered up to its maximum height). Impacts can be on ‘views to’ or ‘views from’ elements, and should be assessed with particular reference to key historic viewpoints and essential settings. These should be considered in relation to a site’s original character and function, as well as to the vantage points and visual experience of a visitor today. In some cases, key historic viewpoints may no longer be identifiable, but it may be possible to make reasonable assumptions on the basis of archaeological or historical information. Key viewpoints should also include those that have subsequently become acknowledged as such, for example, as depicted in artists’ drawings and paintings, or as features on popular routes or trails.
- Impact on the visual connections between related elements, by occlusion,

obstruction, etc. For example, an essential line of sight between historically linked defensive sites will become blocked or impaired by an intervening development.

- Conversely, the creation of inappropriate visual connection between elements not intended to be inter-visible originally, by the removal of intervening structures, barriers, shelters, screening or ground.
- Visual impact of the development itself in relation to the existing historic character of the area, considering:
 - (i) its form – the scale, number, density, massing, distribution, etc. of its constituent features;
 - (ii) its appearance – the size, shape, colour, fabric, etc. of its constituent features.

10.7.13 A search of the HER, Cadw and RCAHMW reveals a total of 39 receptors of historic interest within the study area centred at NGR ST 25048 80915. The majority of these are located to the north of the study area, and relate to the Post-medieval period. There are no Scheduled Monuments but six Listed Buildings.

10.7.14 The site visits, carried out in January 2018 and March 2020, established that the proposed project site is situated far enough away from all the identified receptors so as not to be visible, as the landscape is flat with intervening trees and other buildings. Therefore, no indirect effect is envisaged upon Pill Du Farm, Hendre Road (01333s, 20656, LB13905); Entrance Gateway Faendre Hall (LB23534); Lodge at Faendre Hall (01361s, 36839, LB13944); Faendre Hall Stables (01362s, 43230, LB13946); Vaindre Fawr Farmhouse (01363s, LB13945); Faendre Hall (00361s, 36838, LB13945) and Circular Garden Seat at Faendre Hall (LB23535).

10.7.15 The Peterstone Historic Landscape Character Area 017, one of the component parts of the Registered Gwent Levels Landscape will not be directly affected but part of the north west boundary of Peterstone is adjacent to the proposed project site, and there is no question that the scale of the development proposals will have a notable indirect effect on the northern part of Peterstone HLCA 017 that has been assessed as ‘Fairly Severe’ during the ASIDHOL2 process to assess the indirect effects of the proposals on the component parts of the Gwent Levels Registered Historic Landscape. There is no standard definition of what constitutes a ‘Fairly Severe’ grading for the project site as every site will be different and the ASIDHOL2 process output is a relative score of the overall impact (

10.7.16

10.7.17

10.7.18 Table 10.2).

Table 10.2: ASIDOHL2 STAGE 5: Summary of the overall significance of impact on landscape of historic interest Peterstone, ‘HLCA 017’

VALUE OF CHARACTER AREA (Based on STAGE 4 results)	IMPACT CAUSED BY DEVELOPMENT (Based on STAGES 2 & 3 results)	REDUCTION OF VALUE OF HISTORIC LANDSCAPE AREA ON REGISTER
<p>Very High Key elements of very high intrinsic importance and/or condition and/or not found elsewhere in this or other historic landscape areas on the Register</p> <p>SCORE: 10</p>	<p>Medium Moderate land loss and consequent fragmentation and/or visual intrusion causing some key elements to be removed or changed so that the group value and/or coherence and/or integrity are diminished and/or amenity value reduced.</p> <p>SCORE: 6</p>	<p>Medium Development impact on key elements is such that there is some, but still appreciable, reduction in the overall value of the historic landscape area on the Register.</p> <p>SCORE: 4</p>
TOTAL SCORE: 20	OVERALL SIGNIFICANCE OF IMPACT: Fairly Severe	

Peterstone is a highly significant landscape exhibiting a high degree of integrity and coherence. As a surviving example of Roman reclamation, it is unique in Wales and possibly Northwest Europe. It has escaped large scale agricultural improvement and has been spared much development. The landscape area will not be directly affected but part of the north west boundary of Peterstone is adjacent to the development area, and there is no question that the scale of the development will have a notable indirect effect on the northern part of HLCA 017. This is only tempered by the fact that the majority of the landscape is located further south.

10.7.19 There will be no direct impact upon Rumney Historic Landscape Character Area 018, despite the fact that the western part of the project site (0.13km²) falls within this Character Area. That portion of the project site will remain undeveloped and will therefore be subject to a ‘Slight’ overall impact (

10.7.20 Table 10.3).

Table 10.3 ASIDOHL2 STAGE 5: Summary of the overall significance of impact on landscape of historic interest Rumney, ‘HLCA 018’

VALUE OF CHARACTER AREA (Based on STAGE 4 results)	IMPACT CAUSED BY DEVELOPMENT (Based on STAGES 2 & 3 results)	REDUCTION OF VALUE OF HISTORIC LANDSCAPE AREA ON REGISTER
Low Key elements of low to moderate importance and/or condition and/or group value, and/or of generally low significance in this or other historic landscape areas on the Register.	Low Slight land loss and consequent fragmentation and/or visual intrusion causing limited numbers of key elements to be removed or changed so that the group value and/or coherence and/or integrity are slightly diminished and/or amenity value slightly reduced.	Low Development impact on key elements is such that there is slight reduction in the overall value of the historic landscape area on the Register.
SCORE: 3	SCORE: 3	SCORE: 3
TOTAL SCORE: 9	OVERALL SIGNIFICANCE OF IMPACT: Slight	

Rumney is a relatively developed landscape and whilst it is a typical example of piecemeal medieval enclosure, the removal of many original hedgerows has created a landscape that has few visual barriers to development. The eastern boundary of HLCA018 lies within Project Site but will not be developed and the sense of the landscape being a buffer will only be enhanced by the scale of the development in that area. Despite this, the majority of the Rumney HLCA is located further away, reducing the indirect impact.

Assessment of effects from operation

- 10.7.21 The effects from the operation of the development within the project site are limited to the long-term visual impacts from buildings and infrastructure.

10.8 Mitigation and enhancement

- 10.8.1 This section describes the measures that will be necessary to mitigate against the loss of the archaeological resource as a result of the proposed development. Archaeological receptors are a finite resource and any development that disturbs them will be detrimental, which is why the presumption of PPW is in favour of preservation *in situ*. There are currently no appropriate forms of mitigation for this proposed development that might enhance known archaeological and cultural heritage receptors.
- 10.8.2 Mitigation measures described below are necessarily generalised as the scope and extent of each will need to be specified by APM GGAT following submission of the application for Outline Planning Permission.

Mitigation at the design stage

- 10.8.3 Mitigation of direct effects at the design stage includes retention of a green corridor at the west of the proposed development, which will, by default minimise disturbance of archaeological deposits, and retention of the primary

reen network within and around the surrounding area. Whilst the latter measure is of more ecological significance, the primary reens themselves are historic features that will be retained within the project site. The developable area within the red line boundary is being limited to approximately 29.5ha and will include provision of raised plateaux (see project description Chapter 3, Table 3.1), which will reduce the requirement for intrusive groundworks.

- 10.8.4 Geotechnical investigations within the proposed project site have identified the general depths at which anaerobic peat layers have been encountered (Appendix D4 to Chapter 6). The presence of peat is characteristic within the entire Gwent Levels Registered Landscape and the deposits typically date to the Bronze Age and Roman periods. The preservation of organic material within the peat can be exceptional, which contributes to the importance of the Gwent Levels as an historic landscape. Peat was encountered in eight of the eleven boreholes at a depth ranging between of 0.95m and 8m below the ground surface. Three boreholes (BH 08, BH10 and BH11) contained two deposits of peat separated by clay, with BH11 containing a third peat deposit at 7.61m below the ground surface. BH04 contained a charcoal rich deposit at a depth of 6.55m below the ground which is highly likely to represent an archaeological horizon. As these deposits hold the greatest potential for the preservation of significant archaeological material, loss of archaeological receptors can be mitigated at the design stage by a Planning Condition requiring intrusive works to be kept above the level at which these layers are encountered.
- 10.8.5 Mapping of the peat deposits from borehole data may provide a topographic record that would inform the design to allow concentrations of peat to be avoided. However, the Ground Investigation data currently available (11 bore holes and 5 trial pits) is insufficient to produce anything other than a generalised map and the data does not have the resolution necessary to aid design of structures. An augur survey or similar may be conditioned, which would result in a more accurate plotting of the relative depths of the peat layers. An augur survey will not replace the requirement for geophysical survey and trial trenching.
- 10.8.6 It is likely that much of the structural design for more substantial structures will consist of piling, which may lead to the loss of previously unknown archaeological receptors. Mitigation for loss of assets through piling activities is problematic, though suggested methodologies included in *Piling and Archaeology Guidance and Good Practice*, English Heritage 2019 will be considered as part of the design process.

Mitigation of effects from construction

- 10.8.7 With the exception of elements of field system 86852, there are no known heritage receptors within the project site. There is potential for currently unknown buried archaeological remains to exist within the proposed project site and ground investigations will be conditioned as part of any planning permission in order to establish the presence of any such features. This includes areas selected for reen replacement, as well as areas designated for

active construction development. Assessment of potential would take the form of a programme of geophysical survey followed by targeted trial trenching over anomalies detected during the geophysical survey. The scope of the trial trenching will be set out in a Written Scheme of Investigation prepared following consultation with the APM GGAT and following assessment of the results of the geophysical survey.

- 10.8.8 The development proposals include the removal of 3.5km of hedgerow from north of the railway line and 0.4km of hedgerow from south of the railway line. These hedgerows are integral to the field system and are not considered to be a separate receptor. The majority of this hedgerow is depicted on the Tithe map of 1846, and is considered historic under the *Hedgerow Regulations 1997*. Loss of this historic hedgerow will be mitigated by undertaking survey to determine the nature of the boundaries and to record the extent and characteristics of the hedgerows. The exact specification for the survey will be agreed through consultation with APM GGAT.
- 10.8.9 An archaeological watching brief will be conditioned during the construction phase on intrusive groundworks. The scope and scale of the watching brief will be agreed through consultation with APM GGAT and will take into consideration the results of geophysical survey and test pitting.
- 10.8.10 Following the implementation of the mitigation measures discussed above, the significance of direct effect of the development upon previously unknown archaeological receptors within the project site would be reduced (see section 10.10 and summary matrix 10.11). However it should be noted that archaeological mitigation through preservation by record cannot be considered to entirely mitigate the effects of any development, as the archaeological receptor, considered to be irreplaceable by PPW, will still be permanently removed.

Mitigation of effects from operation

- 10.8.11 No further mitigation will be necessary during the operation of the development.

10.9 Residual effects

Residual effects from construction

- 10.9.1 The residual effect from construction will be the permanent removal of just over 22% of the Trowbridge 019 Historic Landscape Character Area together with the Wentloog Levels field system. The proposals may also result in the permanent loss of currently unknown archaeological receptors that may be located within the project site. Construction effects apply not only to areas under active development but also to locations used temporarily for compounds, access and haul roads etc. if they are not incorporated into the final developed areas. Whilst these areas are not technically being developed, activities carried out might inadvertently result in the loss of archaeological information. There will be minimal residual indirect effects from the

construction itself as visual changes to the surrounding landscape are crystallised in the operation phase of the project site.

Residual effects from operation

- 10.9.2 There will be minimal direct adverse effects incurred upon archaeological receptors, both known and unknown within the development from operation as any receptors will either have been removed or preserved *in situ* during the construction phase. There will be a permanent residual effect (loss) upon a small portion (0.955%) of the Gwent Levels Registered landscape caused by the presence of the development.
- 10.9.3 The indirect effects of the proposed development can be partly mitigated by the use of sympathetic design materials and layout. Some existing hedgerows will be retained and others will be planted for ecological purposes (Chapter 7). The additional hedgerows will develop over time to provide screening from the west, north and east. Combined with the flat topography of the whole area, such measures should reduce the visual impact of the development from short to medium distances by blocking lines of sight.
- 10.9.4 The landscape outside the southern and eastern boundaries of the proposed project site forms part of the Peterstone Historic Landscape Character Area 017, a component part of the Gwent Levels Historic Landscape considered to be a well preserved Roman field system. Although the majority of it is located well to the south of the proposed project site, any development within the proposed project site has the potential to indirectly impact this landscape. Although increasing distance and the relative lack of elevated vantage points within the landscape will partly reduce the visual impact, as might the use of less visually intrusive materials and designs, the scale and form of the development will still be obvious. Current proposals include the retention of a green corridor along Green Lane Reen (Heol Las) which will result in a screening effect to the east and will act in concert with the more extensive existing hedgerows and wooded field boundaries in that area. Screening options for the southern part of the development are more limited due to the relative openness of the landscape.

10.10 Assessment summary matrix

Potential Effect	Receptor (s)	Impact Assessment Desk Based Assessment	Impact Assessment ASIDHOL2	Mitigation	Magnitude (following mitigation) Desk Based Assessment	Magnitude (following mitigation) ASIDHOL2	Comments
Alteration to current landscape. Loss of 22% of HLCA019 through development	Gwent Levels Registered Historic Landscape	Major	Slight	<p>Mitigation through design-retention of green corridor and use of raised plateaux to minimise intrusive groundworks</p> <p>Augur survey or trial pitting to identify peat levels; subsequent Planning Condition to keep intrusive groundworks above established peat levels.</p> <p>Recording of Historic Hedgerows subject to removal and replanting of hedgerows in other areas</p> <p>Programme of geophysical survey across the site to establish baseline anomalies</p> <p>Programme of archaeological trial trenching to investigate geophysical anomalies and evaluation of construction footprint through trial trenching.</p> <p>Archaeological watching brief during construction</p> <p>Preservation by record of any buried archaeological receptors</p>	Minor	Slight	<p>Impacts only a small percentage of the overall landscape (0.955%)</p> <p>No mitigation can reduce the impact on the wider landscape</p>

Potential Effect	Receptor (s)	Impact Assessment Desk Based Assessment	Impact Assessment ASIDHOL2	Mitigation	Magnitude (following mitigation) Desk Based Assessment	Magnitude (following mitigation) ASIDHOL2	Comments
				identified during the course of the works.			
Removal of the existing field system and realignment of drainage system	Field System 86852	Major	Fairly Severe	<p>Mitigation through design-retention of green corridor and use of raised plateaux to minimise intrusive groundworks</p> <p>Augur survey or trial pitting to identify peat levels; subsequent Planning Condition to keep intrusive groundworks above established peat levels.</p> <p>Recording of Historic Hedgerows subject to removal and replanting of hedgerows in other areas</p> <p>Programme of geophysical survey across the site to establish baseline anomalies</p> <p>Programme of archaeological trial trenching to investigate geophysical anomalies and evaluation of construction footprint through trial trenching.</p> <p>Archaeological watching brief during construction</p> <p>Preservation by record of any buried archaeological receptors identified during the course of the works.</p>	Major/Minor	Moderate	<p>Mitigation cannot compensate for complete loss of the field system.</p> <p>Preservation by record can reduce the magnitude of the impact through preservation by record.</p>